

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
Edwin SOUTHERN et al. :  
Serial No. NEW : Attn: Application Branch  
Filed August 23, 2001 : Attorney Docket No. 2001\_1178

A METHOD FOR ANALYSING A POLYNUCLEOTIDE  
CONTAINING A VARIABLE SEQUENCE AND A SET  
OR ARRAY OF OLIGONUCLEOTIDES THEREFOR (AS AMENDED)  
(Rule 1.53(b) Divisional of Serial No. 09/502,778,  
Filed February 11, 2000)

SUBMISSION OF REVISED FORMAL DRAWINGS

Assistant Commissioner for Patents,  
Washington, DC 20231

Sir:

There are submitted herewith seven sheets of paper formal drawings in the above-identified application showing Figs. 1-6.

The attached drawings have been revised to correct each item objected to by the Examiner and/or the Chief Draftsman.

Kindly substitute the attached formal drawings for those of record.

Respectfully submitted,  
Edwin SOUTHERN et al.

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August 23, 2001

Fig.1

JC970 U.S. Pro  
09/934604  
06/23/01

## Detection of point mutation by single base extension

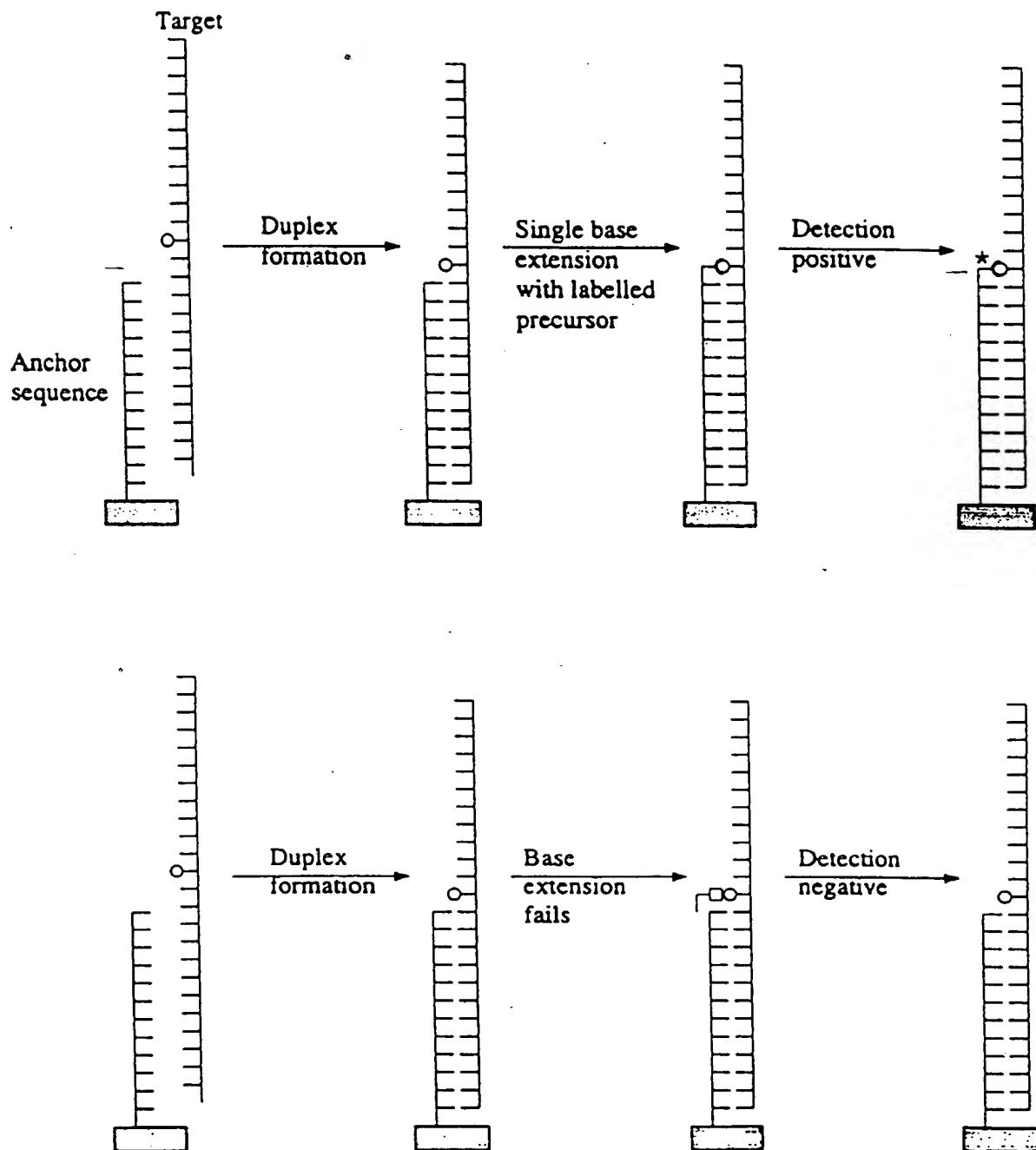


Fig.2

Detection of point mutation by hybridisation to ASOs  
and chain extension

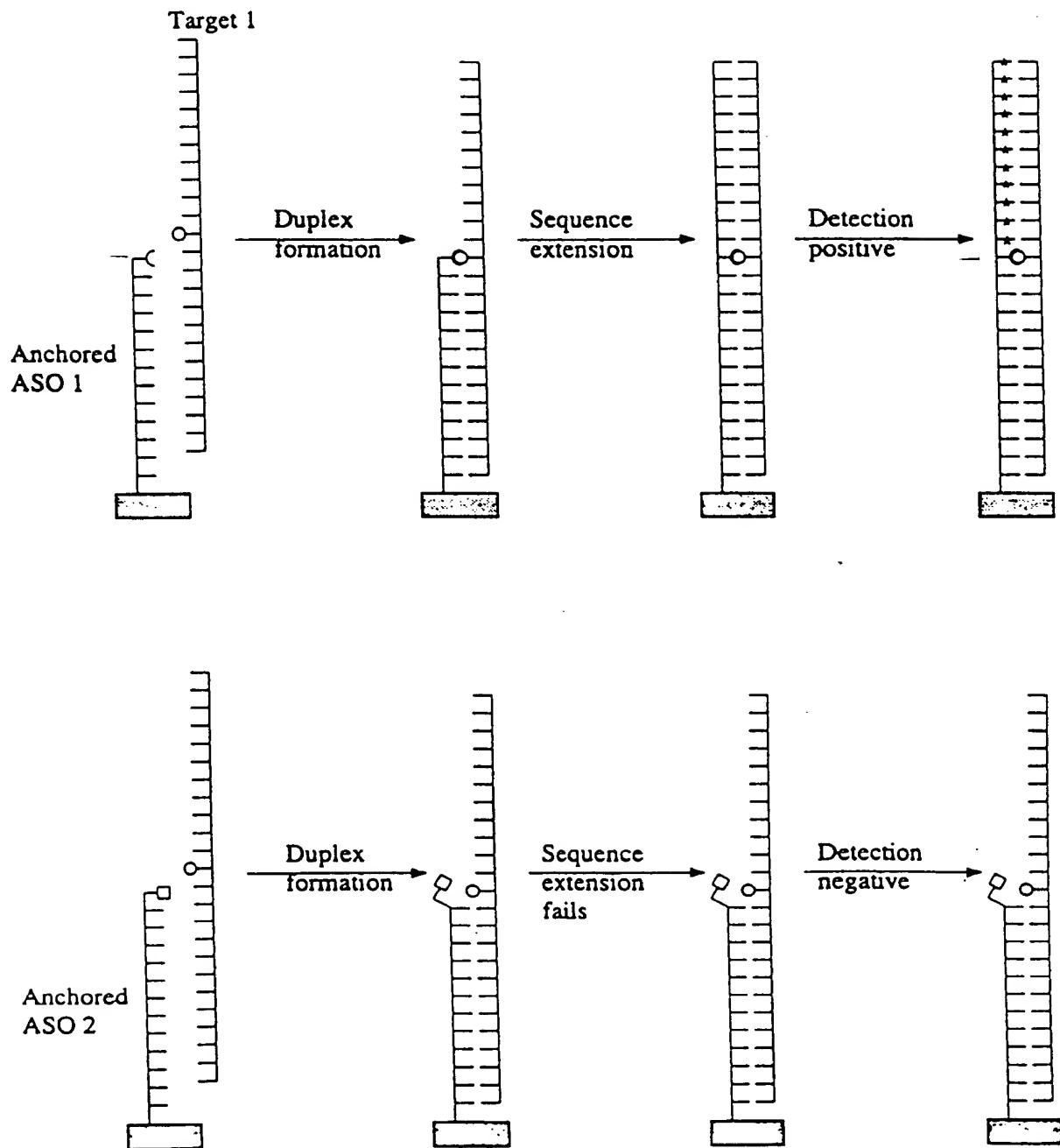
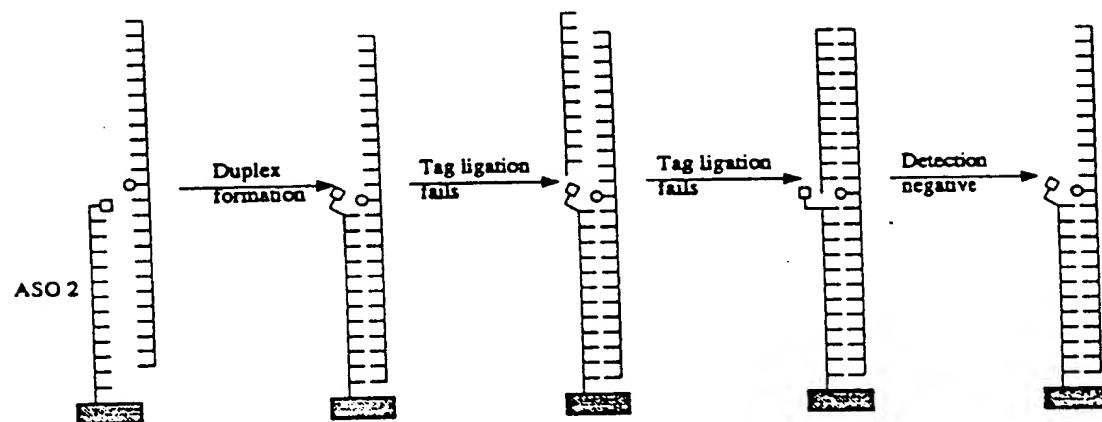
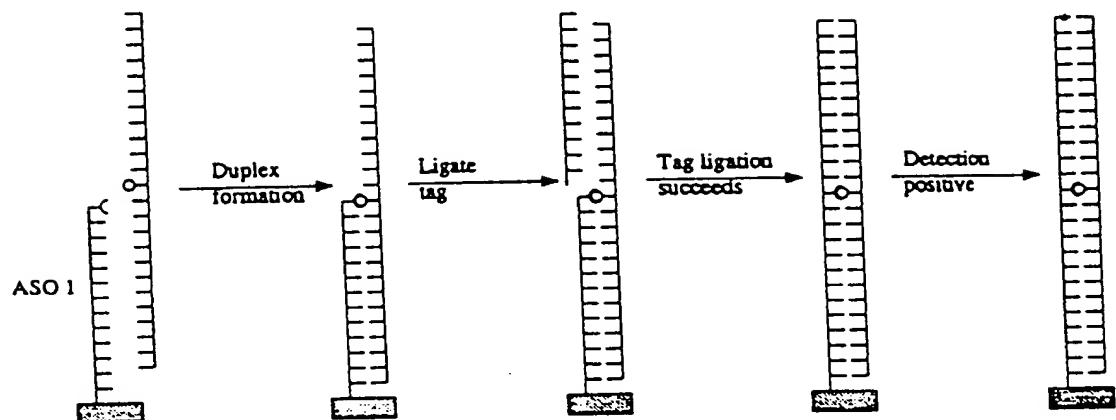


Fig.3

## A. Detection of point mutation by tag ligation to ASOs



## B. Detection of point mutation by ligation to library of differentially tagged ASOs

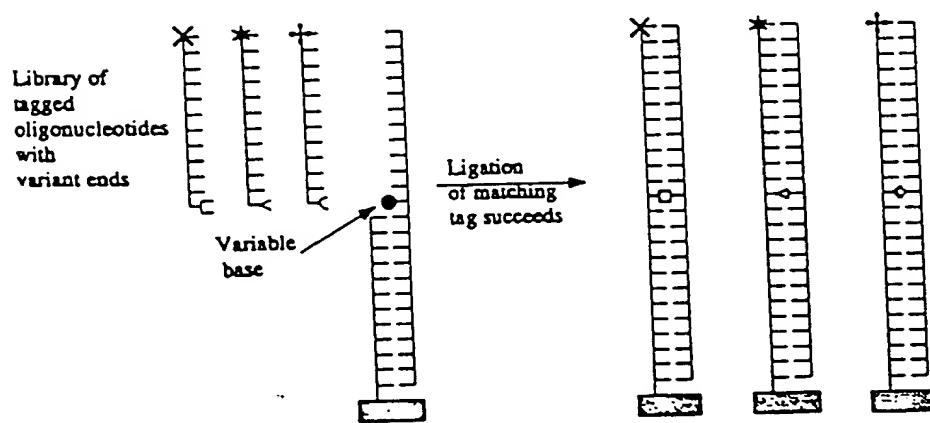
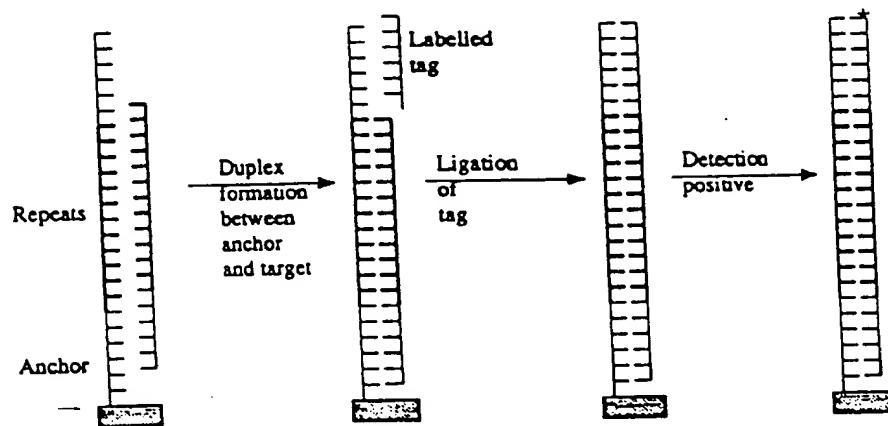


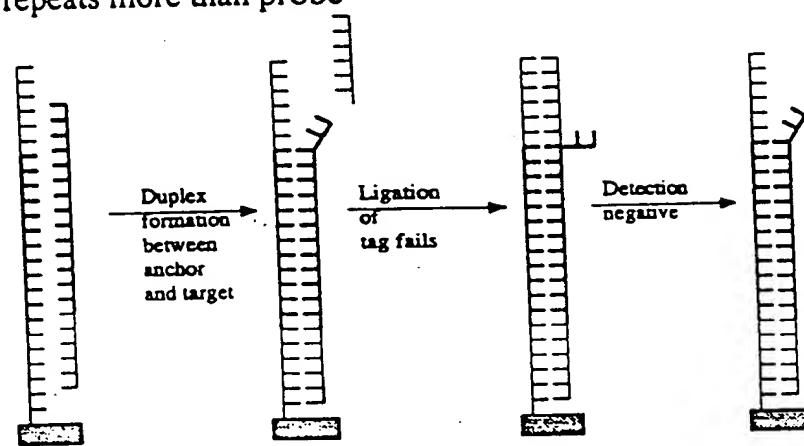
Fig.4a

## Analysis of VNTRs by ligation of tag to allelic variants

## A. Target repeats equal probe



## B. Target repeats more than probe



## C. Target repeats less than probe

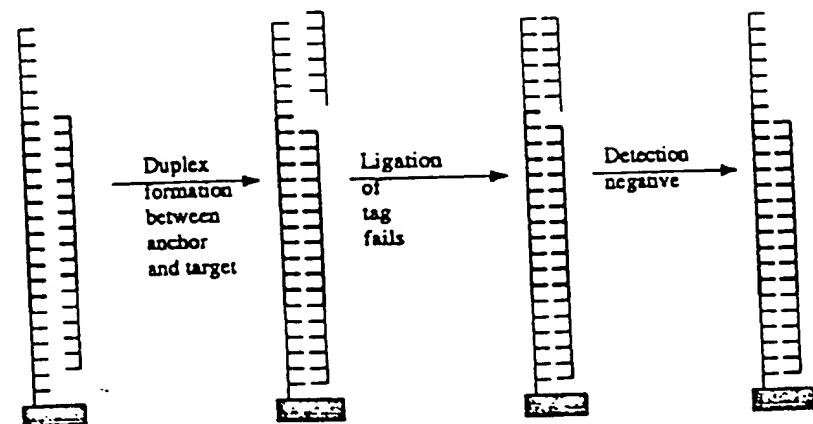
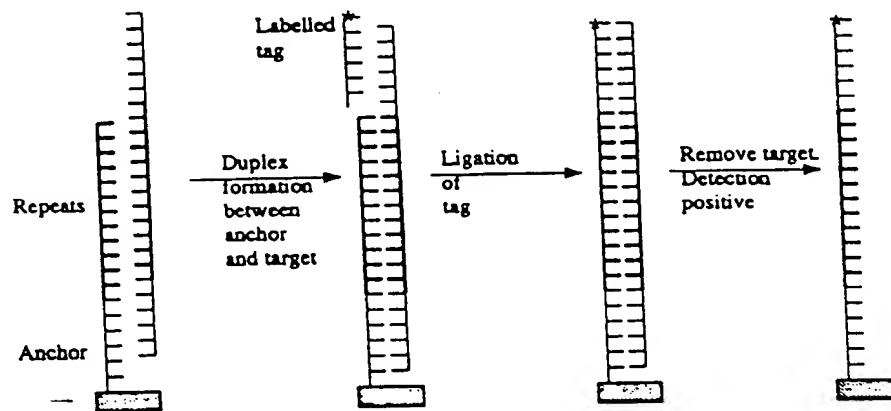


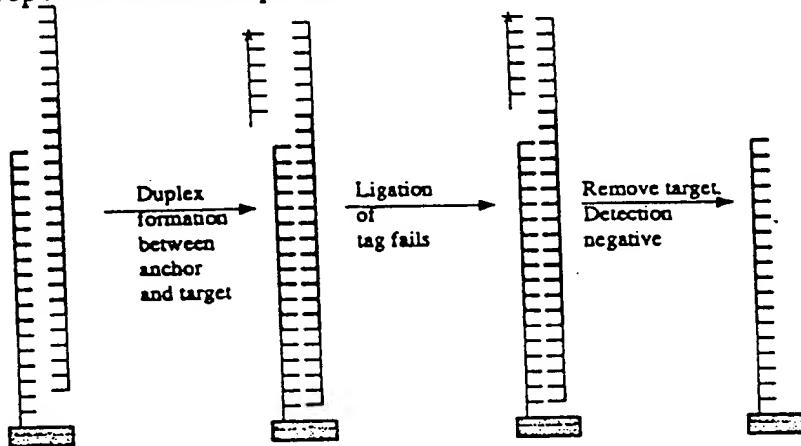
Fig.4b

## Analysis of VNTRs by ligation of tag to allelic variants

## A. Target repeats equal probe



## B. Target repeats more than probe



## C. Target repeats less than probe

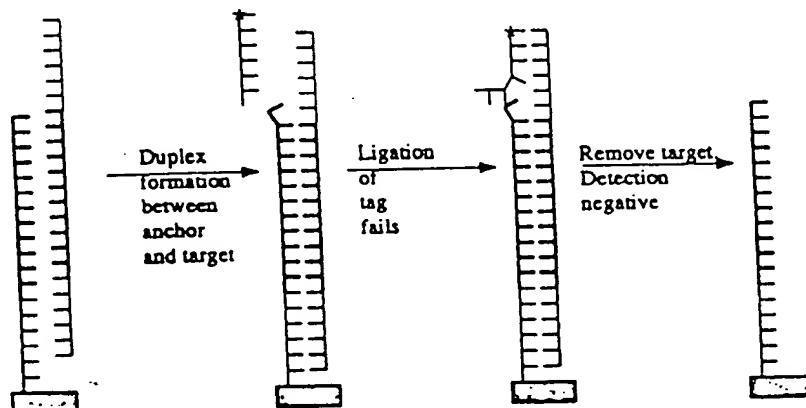
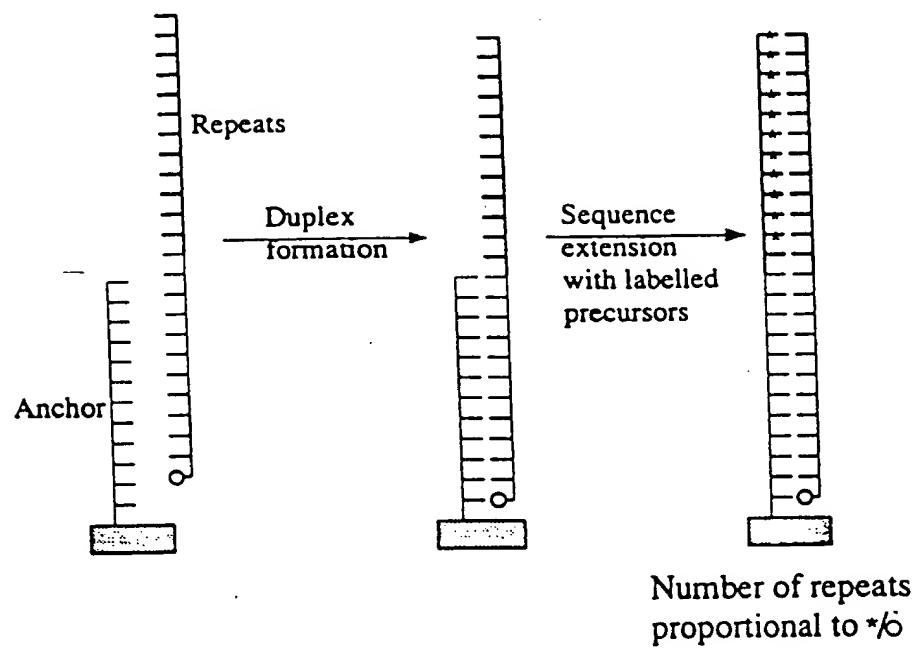


Fig.5

Measurement of VNTRs by labelled chain extension

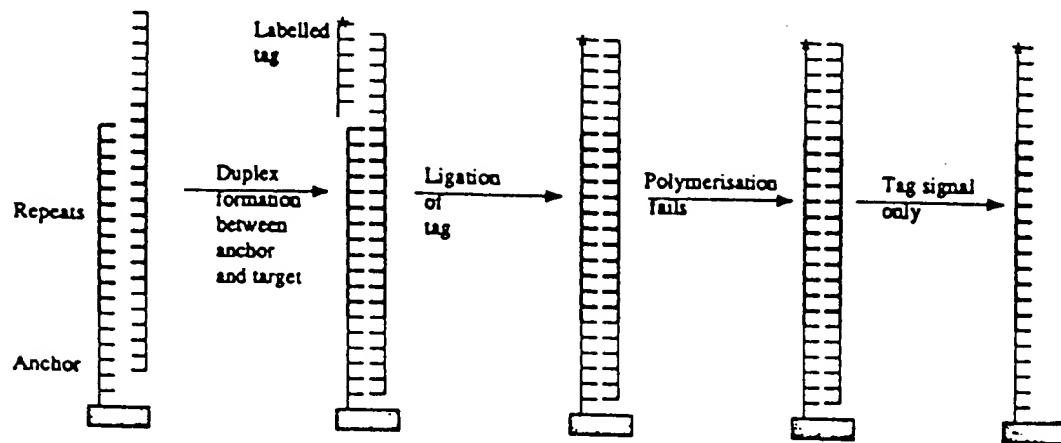


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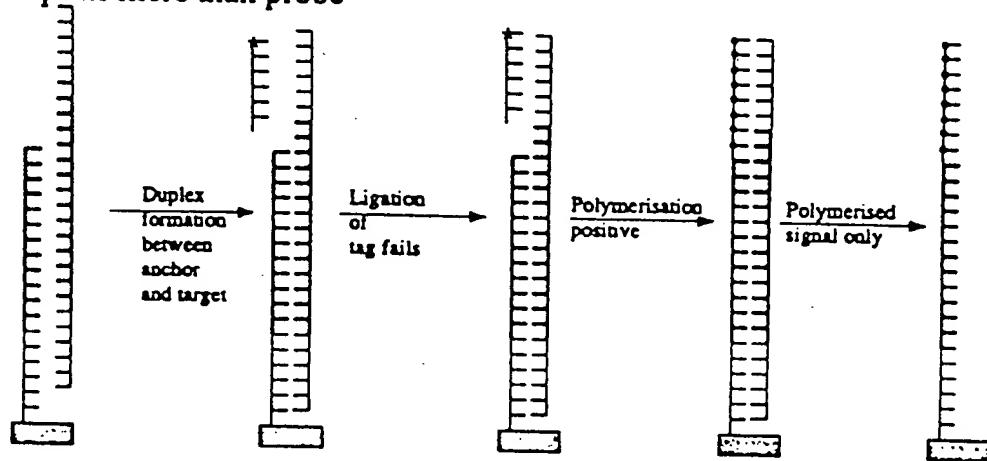
Fig.6

## Analysis of VNTRs by ligation of tag followed by chain extension

## A. Target repeats equal probe



## B. Target repeats more than probe



## C. Target repeats less than probe

